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MECADEZ CORE TECHNOLOGIES PRIVATE LIMITED
PROJECT MANAGEMENT & CONSULTANCYSERVICES

Test Report
Consistency test

Project Name	Drilling of Borewells and Providing RO Plants at Dwarakanagara, Palanahalli, Thirumenahalli and Srirampura in Ward No:05
Client	Executive Engineer,Yelahanka Project Division
Job No	MCTPL/BBMP/YNK-Project/PMC/2017-2018/QR/1
Mix Type	Plain cement concrete
Contractor	Sri GopiReddy, Bangalore
Test Method	IS : 4031 (Part 5) -1988 & Specification for Road & Bridge Works, MORT&H, Rev-V.
Location	At Site
Material	Cement
Sample No	1
Date	21-Mar-2018

Sl. No.	Description	Trial 1	Trial 2	Trial 3	Trial 4	Trial 4
1	Weight of Cement	400	400	400	400	400
2	Percentage of water added (%)	28	28.5	29	30.4	30.5
3	Weight of Water (gm)	112	114	116	121.6	122
4	Initial Reading of Plunger (mm)	40	40	40	40	40
5	Difference (mm)	18.1	17	12	6.2	5.5

Results: Standard Consistency of Cement: 30.40%

Note:

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For Mecadez Core Technologies Private Limited

Asst. Executive Engineer
Project Division
Yelahanka Zone
Bangalore

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MECADEZ CORE TECHNOLOGIES PRIVATE LIMITED
PROJECT MANAGEMENT & CONSULTANCY SERVICES

Test Report
Fineness test

Project Name	Drilling of Borewells and Providing RO Plants at Dwarakanagara, Palanahalli, Thirumenahalli and Srirampura in Ward No:05
Client	Executive Engineer,Yelahanka Project Division
Job No	MCTPL/BBMP/YNK-Project/PMC/2017-2018/QR/1
Mix Type	Plain cement concrete
Contractor	Sri GopiReddy, Bangalore
Test Method	IS : 4031 (Part 5) -1988 & Specification for Road & Bridge Works, MORT&H, Rev-V.
Location	At site
Material	Cement
Sample No	1
Date	21-Mar-2018

Sl. No.	Determination	Trial 1	Trial 2
1	Weight of Cement before sieve (gm)	100	100
2	Weight of residue retained on 90um sieve (gm)	5.3	4.3
3	Percentage retained (%)	5.3	4.3
4	Average Percentage retained (%)	4.80	

Results: Residue of cement is: 4.80%

Comments: Maximum allowable residue by mass for ordinary portlad cement is 10%

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Asst. Executive Engineer
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Yelahanka Zone
Bangalore

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MECADEZ CORE TECHNOLOGIES PRIVATE LIMITED
PROJECT MANAGEMENT & CONSULTANCYSERVICES

Test Report
Soundness test

Project Name	Drilling of Borewells and Providing RO Plants at Dwarakanagara, Palanahalli, Thirumenahalli and Srirampura in Ward No:05
Client	Executive Engineer,Yelahanka Project Division
Job No	MCTPL/BBMP/YNK-Project/PMC/2017-2018/QR/1
Mix Type	Plain cement concrete
Contractor	Sri GopiReddy, Bangalore
Test Method	IS : 4031 (Part 3) -1988 & Specification for Road & Bridge Works, MORT&H, Rev-V.
Location	At Site
Material	Cement
Sample No	1
Date	21-Mar-2018

Sl. No.	Description	Trial 1	Trial 2	Trial 3
1	Initial Distance between the indicator points of Lechatelier mould	11	10	11
2	Final Distance between the indicator points of Lechatelier mould	17	18	18
3	Difference or expansion	6	8	7
4	Average Differences or Expansion in mm	7.00		

Results: Difference in Expansion of Cement: 7mm

Comments: Maximum allowable Expansion of cement is 10mm.

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Asst. Executive Engineer
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Bangalore

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Test Report
Compressive strength test

	Drilling of Borewells and Providing RO Plants at Dwarakanagara, Palanahalli, Thirumenahalli and Srirampura in Ward No:05
	Executive Engineer,Yelahanka Project Division
	MCTPL/BBMP/YNK-Project/PMC/2017-2018/QR/1
	Plain cement concrete
	Sri GopiReddy, Bangalore
	IS : 4031 (part 6)-1988 & Specification for Road & Bridge Works, MORT&H, Rev. V.

	At Site
	Cement
	1
	17-Mar-2018

Cube	Cement Grade	Age at Test (Days)	Slump (mm)	Weight (kg)	Dimension (LxWxH)	Density (kg/m3)	Max. Load (KN)	Area (mm2)	Compressive Strength (N/mm2)	Average Sample (n/mm2)
	43	7	-	0.85	70.6x70.6 x70.6	2415.49	187	4984.36	37.52	38.02
2	43	7	-	0.86	70.6x70.6 x70.6	2443.91	192	4984.36	38.52	

: -days Compressive strength of cement is 37.92N/mm^2

: -days Compressive strength of cement should not be less than 33 N/mm^2

:

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Asst. Executive Engineer
Project Division
Yelahanka Zone
Bangalore

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Test Report
Compressive strength test

Project Name	Drilling of Borewells and Providing RO Plants at Dwarakanagara, Palanahalli, Thirumenahalli and Srirampura in Ward No:05
Client	Executive Engineer,Yelahanka Project Division
Job No	MCTPL/BBMP/YNK-Project/PMC/2017-2018/QR/1
Mix Type	Plain cement concrete
Contractor	Sri GopiReddy, Bangalore
Test Method	IS : 4031 (part 6)-1988 & Specification for Road & Bridge Works, MORT&H, Rev. V.
Location	At Site
Material	Cement
Sample No	1
Date	7-Apr-2018

Cube	Cement Grade	Age at Test (Days)	Slump (mm)	Weight (kg)	Dimension (LxWxH)	Density (kg/m3)	Max. Load (KN)	Area (mm2)	Compressive Strength (N/mm2)	Average Sample (n/mm2)
	43	28	-	0.88	70.6x70.6 x70.6	2501	237	4984.36	47.55	47.45
2	43	28	-	0.85	70.6x70.6 x70.6	2316	236	4984.36	47.35	

Results: 28-days Compressive strength of cement is 47.55N/mm^2

Comments: 28-days Compressive strength of cement should not be less than 43 N/mm^2

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Asst. Executive Engineer
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Yelahanka Zone
Bangalore

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Test Report
Gradation test

Project Name	Drilling of Borewells and Providing RO Plants at Dwarakanagara, Palanahalli, Thirumenahalli and Srirampura in Ward No:05
Client	Executive Engineer,Yelahanka Project Division
Job No	MCTPL/BBMP/YNK-Project/PMC/2017-2018/QR/1
Mix Type	Plain cement concrete
Contractor	Sri GopiReddy, Bangalore
Test Method	IS : 2386 (Part - 1) 1963 & Specification for Road & Bridge Works, MORT&H, Rev. V.
Location	At site
Material	Fine Aggregates
Sample No	1
Date	21-Mar-2018

Weight of Sample(gram): 200

Sl No.	IS Sieve Size	Weight retained	% retained	% Cumulative	Cumulative % of Passing		Remarks
					% Passing	Gradation limits	
1	10 mm	0	0.00	0.00	100.00	100	Gradation satisfies the MORT&H Zone II Specification
2	4.75 mm	17	8.50	8.50	91.50	90-100	
3	2.36 mm	18	9.00	17.50	82.50	75-100	
4	1.18 mm	16	8.00	25.50	74.50	55-90	
5	600 µ	42	21.00	46.50	53.50	35-59	
6	300 µ	56	28.00	74.50	25.50	8-30	
7	150 µ	40	20.00	94.50	5.50	0-10	

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Asst. Executive Engineer
Project Division
Yelahanka Zone
Bangalore

Test Report
Gradation test

Project Name	Drilling of Borewells and Providing RO Plants at Dwarakanagara, Palanahalli, Thirumenahalli and Srirampura in Ward No:05
Client	Executive Engineer,Yelahanka Project Division
Job No	MCTPL/BBMP/YNK-Project/PMC/2017-2018/QR/1
Mix Type	Plain cement concrete
Contractor	Sri GopiReddy, Bangalore
Test Method	IS : 2386 (Part - 1) 1963 & Specification for Road & Bridge Works, MORT&H, Rev. V.
Location	At site
Material	Fine Aggregates
Sample No	2
Date	23-Mar-2018

Weight of Sample(gram): 200

Sl No.	IS Sieve Size	Weight retained	% retained	% Cumulative	Cumulative % of Passing		Remarks
					% Passing	Gradation limits	
1	10 mm	0	0.00	0.00	100.00	100	Gradation satisfies the MORT&H Zone II Specification
2	4.75 mm	17	8.50	8.50	91.50	90-100	
3	2.36 mm	23	11.50	20.00	80.00	75-100	
4	1.18 mm	21	10.50	30.50	69.50	55-90	
5	600 µ	38	19.00	49.50	50.50	35-59	
6	300 µ	60	30.00	79.50	20.50	8-30	
7	150 µ	36	18.00	97.50	2.50	0-10	

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Yelahanka Zone
Bangalore

Test Report
Gradation test

MECADEZ CORE TECHNOLOGIES PRIVATE LIMITED
QUALITY MANAGEMENT & CONSULTANCY SERVICES

Project Name	Drilling of Borewells and Providing RO Plants at Dwarakanagara, Palanahalli, Thirumenahalli and Sriranpura in Ward No.05
Client	Executive Engineer,Yelahanka Project Division
Lab No	MCTPL/BBMP/YNK-Project/PMC/2017-2018/QR/1
Work Type	Plain cement concrete
Contractor	Sri GopiReddy, Bangalore
Test Method	IS : 2386 (Part - 1) 1963 & Specification for Road & Bridge Works, MORT&H, Rev. V.
Location	At site
Material	Fine Aggregates
Sample No	3
Date	24-Mar-2018

Weight of Sample(gram): 200

Sl No.	IS Sieve Size	Weight retained	% retained	% Cumulative	Cumulative % of Passing		Remarks
					% Passing	Gradation limits	
1	10 mm	0	0.00	0.00	100.00	100	Gradation satisfies the MORT&H Zone II Specification for PQC
2	4.75 mm	15	7.50	7.50	92.50	90-100	
3	2.36 mm	21	10.50	18.00	82.00	75-100	
4	1.18 mm	18	9.00	27.00	73.00	55-90	
5	600 µ	30	15.00	42.00	58.00	35-59	
6	300 µ	65	32.50	74.50	25.50	8-30	
7	150 µ	41	20.50	95.00	5.00	0-10	

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Bangalore

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MECADEZ CORE TECHNOLOGIES PRIVATE LIMITED
PROJECT MANAGEMENT & CONSULTANCY SERVICES

Test Report
Gradation test

Project Name	Drilling of Borewells and Providing RO Plants at Dwarakanagara, Palanahalli, Thirumenahalli and Srirampura in Ward No:05
Client	Executive Engineer,Yelahanka Project Division
Lab No	MCTPL/BBMP/YNK-Project/PMC/2017-2018/QR/1
Test Type	Plain cement concrete
Contractor	Sri GopiReddy, Bangalore
Test Method	IS : 2386 (Part - 1) 1963 & Specification for Road & Bridge Works, MORT&H, Rev. V.
Location	At site
Material	Coarse aggregates
Sample No	1
Date	21-Mar-2018

Weight of Sample: 4000 gms

Sl. No	I.S. Sieve size	Weight Retained (gm)	Percentage of weight Retained (%)	Percentage of weight retained (%)	Passing		Remarks
					Test Result	Limits as per MORT&H	
1	31.50	0	0.00	0.00	100.00	100	
2	26.50	490	12.25	12.25	87.75	85-95	Material Satisfies the PQC Gradation
3	19.00	238	5.95	18.20	81.80	68-88	
4	9.50	674	16.85	35.05	64.95	45-65	
5	4.75	422	10.55	45.60	54.40	30-55	
6	0.60	984	24.60	70.20	29.80	8-30	
7	0.15	851	21.28	91.48	8.53	5-15	
8	0.08	257	6.43	97.90	2.10	0-5	

Note:

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Project Division
Yelahanka Zone
Bangalore

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Test Report
Gradation test

Project Name	Drilling of Borewells and Providing RO Plants at Dwarakanagara, Palanahalli, Thirumenahalli and Srirampura in Ward No:05
Client	Executive Engineer,Yelahanka Project Division
Job No	MCTPL/BBMP/YNK-Project/PMC/2017-2018/QR/1
Mix Type	Plain cement concrete
Contractor	Sri GopiReddy, Bangalore
Test Method	IS : 2386 (Part - 1) 1963 & Specification for Road & Bridge Works, MORT&H, Rev. V.
Location	At site
Material	Coarse aggregates
Sample No	2
Date	23-Mar-2018

Weight of Sample: 4000 gms

Sl. No	I.S. Sieve size	Weight Retained (gm)	Percentage of weight Retained (%)	Percentage of weight retained (%)	Passing		Remarks
					Test Result	Gradation Limits as per	
1	31.50	0	0.00	0.00	100.00	100	Material Satisfies the PQC Gradation
2	26.50	493	12.33	12.33	87.68	85-95	
3	19.00	330	8.25	20.58	79.43	68-88	
4	9.50	631	15.78	36.35	63.65	45-65	
5	4.75	423	10.58	46.93	53.08	30-55	
6	0.60	940	23.50	70.43	29.58	8-30	
7	0.15	847	21.18	91.60	8.40	5-15	
8	0.08	253	6.33	97.93	2.08	0-5	

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Asst. Executive Engineer
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Yelahanka Zone
Bangalore

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PROJECT MANAGEMENT & CONSULTANCY SERVICES

Test Report
Gradation test

Project Name	Drilling of Borewells and Providing RO Plants at Dwarakanagara, Palanahalli, Thirumenahalli and Srirampura in Ward No:05
Client	Executive Engineer,Yelahanka Project Division
Job No	MCTPL/BBMP/YNK-Project/PMC/2017-2018/QR/1
Mix Type	Plain cement concrete
Contractor	Sri GopiReddy, Bangalore
Test Method	IS : 2386 (Part - 1) 1963 & Specification for Road & Bridge Works, MORT&H, Rev. V.
Location	At site
Material	Coarse aggregates
Sample No	3
Date	24-Mar-2018

Weight of Sample: 4000 gms

Sl. No	I.S. Sieve size	Weight Retained (gm)	Percentage of weight Retained (%)	Percentage of weight retained (%)	Passing		Remarks
					Test Result	Gradation Limits as per	
1	31.50	0	0.00	0.00	100.00	100	Material Satisfies the PQC Gradation
2	26.50	512	12.80	12.80	87.20	85-95	
3	19.00	330	8.25	21.05	78.95	68-88	
4	9.50	625	15.63	36.68	63.33	45-65	
5	4.75	412	10.30	46.98	53.03	30-55	
6	0.60	900	22.50	69.48	30.53	8-30.	
7	0.15	845	21.13	90.60	9.40	5-15	
8	0.08	260	6.50	97.10	2.90	0-5	

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MECADEZ CORE TECHNOLOGIES PRIVATE LIMITED
PROJECT MANAGEMENT & CONSULTANCY SERVICES

Test Report
Water absorption test

Project Name	Drilling of Borewells and Providing RO Plants at Dwarakanagara, Palanahalli, Thirumenahalli and Srirampura in Ward No:05
Client	Executive Engineer,Yelahanka Project Division
Job No	MCTPL/BBMP/YNK-Project/PMC/2017-2018/QR/1
Mix Type	Plain cement concrete
Contractor	Sri GopiReddy, Bangalore
Test Method	IS : 2386 (Part - 3) 1963 & Specification for Road & Bridge Works, MORT&H, Rev. V.
Location	At site
Material	Coarse aggregates
Sample No	1
Date	21-Mar-2018

Sl. No.	Particulars	Computations	Test Numbers		Mean
			Test 1	Test 2	
1	Weight of SSD sample	W_1 g	761	763	
2	Aggregates Immersed in	W_2g	2080	2090	
3	Weight of Saturated Aggregate in water	$W_s g = W_2 - W_1$	1319	1327	
4	dry aggregate in Air	W_3 g	2115	2115	
5	Volume of the Aggregate	$W_3 - W_s$	796	788	
6	Aggregate	W_4g	2076	2086	
7	Specific Gravity	$W_4/(W_3 - W_s)$	2.61	2.65	2.63
8	Apparent Specific Gravity	$W_4/(W_4 - W_s)$	2.74	2.75	2.75
9	Water Absorption	$(W_4 - W_3)*100/W_4$	1.88	1.39	1.64

Comments: Maximum allowable Aggregate Water Absorption value for PCC is 2.0%.

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PROJECT MANAGEMENT & CONSULTANCY SERVICES

Test Report
Water absorption test

Project Name	Drilling of Borewells and Providing RO Plants at Dwarakanagara, Palanahalli, Thirumenahalli and Srirampura in Ward No:05
Client	Executive Engineer,Yelahanka Project Division
Job No	MCTPL/BBMP/YNK-Project/PMC/2017-2018/QR/1
Mix Type	Plain cement concrete
Contractor	Sri GopiReddy, Bangalore
Test Method	IS : 2386 (Part - 1) 1963 & Specification for Road & Bridge Works, MORT&H, Rev. V.
Location	At site
Material	Coarse Aggregates
Sample No	2
Date	22-Mar-2018

Sl. No.	Particulars	Computations	Test Numbers		Mean
			Test 1	Test 2	
1	Immersed in Water	W_1 g	765	765	
2	Aggregates Immersed in	W_2g	2095	2090	
3	Weight of Saturated Aggregate in water	$W_s g = W_2 - W_1$	1330	1325	
4	dry aggregate in Air	W_3 g	2130	2115	
5	Volume of the Aggregate	$W_3 - W_s$	800	790	
6	Aggregate	W_4g	2091	2086	
7	Specific Gravity	$W_4/(W_3 - W_s)$	2.61	2.64	2.63
8	Apparent Specific Gravity	$W_4/(W_4 - W_s)$	2.75	2.74	2.74
9	Water Absorption	$(W_4 - W_3)*100/W_4$	1.87	1.39	1.63

Comments: Maximum allowable Aggregate Water Absorption value for PCC is 2.0%.

Note:

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